

Taiwan EPC Investor Generates Approximately 27% More Revenue* with SolarEdge Farm Rooftop Installation

The Challenge

Passion light Inc., a Taiwan-based EPC investor, decided to take advantage of local Feed-in-Tariff (FiT) benefits and install a commercial PV system. The location they chose was the rooftop of Jenong Farm. As a longtime purchaser of fruit from the farm, Lewis Liao, the owner of Passion light Inc., recognized the value of the unused rooftop space for producing green energy.

In Taiwan, the FiT rates are very attractive, making a commercial PV system an appealing investment for system owners as well as for some EPCs. In this case, the building owner, Jenong Farm, effectively rents out their rooftop for a monthly fee to Passion light Inc. In turn, Passion light Inc. both installed and owns the PV system on the rooftop for a 20-year period.



Installation at a Glance:

- Total PV capacity: 190.75kW
- Solar modules: AUO 350W x 545
- Inverters: SE27.6 x 6
- Power optimizers: P730 x 273
- Accessories: Firefighter gateway
- Distributor: Billion Watts Technologies



More Power by Design

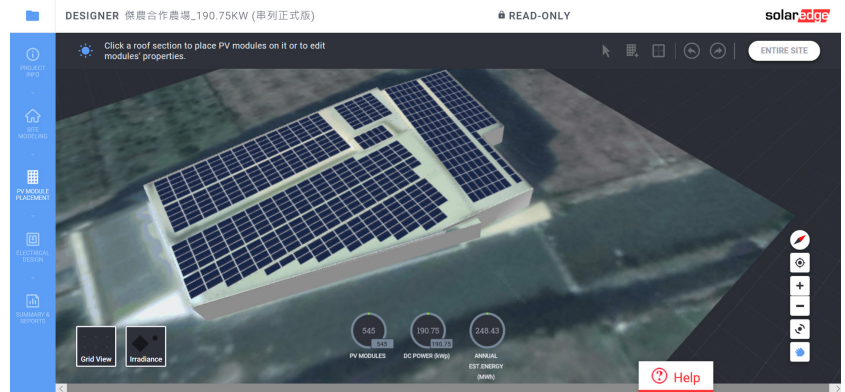
In order to increase revenue generated from FiT, Passion light Inc. was looking for a solution to maximize the amount of solar energy generated. Because the farm factory's rooftop has many different tilts, angles, and heights, shading and design limitations were both major issues. This is one of the reasons Passion light Inc. selected SolarEdge's commercial PV solution. Had they selected a traditional string inverter, the system's capacity would have been only 150kW due to design limitations. However, by using SolarEdge's



*In comparison to a traditional string inverter

flexible DC optimized solution which enables placement of PV modules in partially shaded areas, strings of uneven lengths, and strings in multiple orientations, they could maximize the rooftop space with more modules, effectively increasing the system's capacity by approximately 27% to 190.75 kW.

With SolarEdge Designer, a free web-design tool for SolarEdge installers, Passion light Inc. was able to design the initial PV system layout in only 20 minutes. They also leveraged Designer's summary report feature to create a proposal full of compelling information, such as highly accurate energy production, shading estimations and easy to follow infographics explaining why SolarEdge was the best solution for this farm's rooftop.

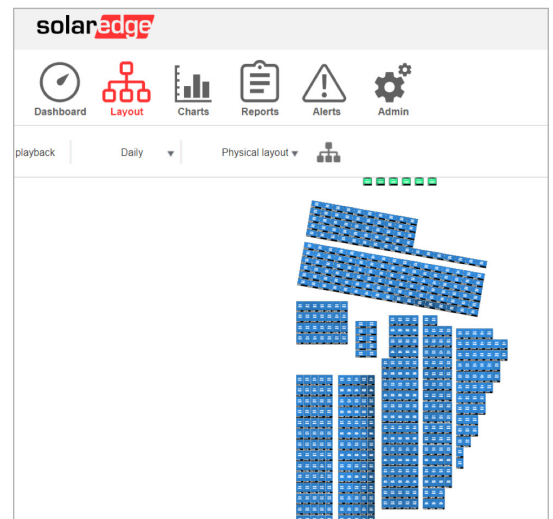


Jenong Farm rooftop system design in 3D on SolarEdge Designer

Module-Level Optimization

Unlike inverters that only optimize energy at the string level, the SolarEdge solution uses power optimizers to mitigate power losses caused by module mismatch, aging, and more. This results in maximum power generation from each module.

The power optimizers also communicate performance data to the SolarEdge monitoring platform, which is free for 25 years and easily accessible via computer or app. This allows system managers and installers, such as Passion light Inc., to view module data in real-time, enabling them to pinpoint underperforming modules within the 545-module system. They also receive alert notifications, complete data reports, and more important features that can reduce the time of on-site visits and makes the overall O&M process more efficient and less expensive.



View of SolarEdge's module-level monitoring capabilities for installers in the SolarEdge monitoring platform

Putting Safety First

Because the PV system is built above the farm's factory, where employees work with machinery that cleans and packages fruit, the safety of both employees and the equipment is of utmost importance. SolarEdge offers two embedded features for enhanced safety: SafeDC™ and arc fault detection to reduce the risk of electrocution and fires in the PV system. For a PV system owner such as Passion light Inc., this is important because the ability to automatically detect arc faults in wires, connectors, or other components can significantly minimize the risk of fire in a PV system.

Passion light Inc. wisely decided to include an additional safety PV system, the SolarEdge firefighter gateway, which connects directly to the building's fire alarm system. In the event of an emergency, firefighters can immediately stop system production either manually using the gateway's emergency stop button or automatically through the fire alarm control panel system. In both cases, the SolarEdge inverter's built-in SafeDC™ feature is triggered, reducing the PV strings' high DC voltage to touch-safe levels.



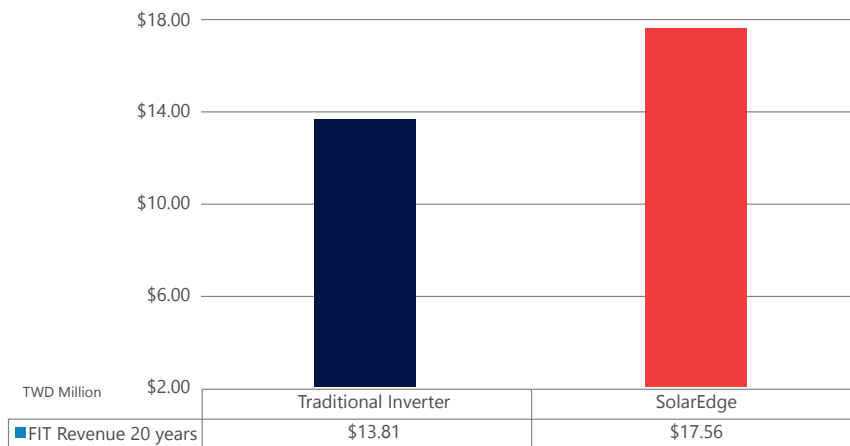
“The mission of our company is Safety first, benefits later. When it comes to PV systems, SolarEdge’s safety solution is the only one we trust to achieve this mission. We love the safe system shutdown feature because it enables firefighters to complete tasks in emergency situations without having to worry about the risks of working around damaged electrical cables. With SolarEdge, system owners have peace of mind for their PV system, employees, and building collateral.”

Lewis Liao, Owner of Passion light Inc.



The Bottom Line: More Clean Energy, More Revenue, More Peace of Mind

Overall, installing a SolarEdge commercial PV system instead of a traditional string inverter gave Passion light Inc., an additional FiT revenue of \$513 NTD per day, or **\$187,534 NTD** per year over a 20 year period. With SolarEdge’s commercial PV solution for farms, Passion light Inc. was able to increase the system size by 117 modules, leading to an approximately 27% increase in revenue. Jenong Farm’s owners have the peace of mind in knowing that SolarEdge’s enhanced safety solution would protect their employees and assets, and together both companies could benefit from knowing that they were creating a cleaner, greener future for Taiwan.



About SolarEdge

SolarEdge is a global leader in smart energy, delivering innovative commercial and residential solutions that power our lives and drive future progress. Leveraging world-class engineering and a relentless focus on innovation, SolarEdge developed a ground-breaking intelligent inverter solution that changed the way power is harvested and managed in photovoltaic (PV) systems. Today SolarEdge is the world’s #1 solar inverter company in revenue with more than 2.3 million SolarEdge intelligent inverters and more than 54 million power optimizers installed in 133 countries. SolarEdge addresses a broad range of smart energy market segments through its PV, storage, EV charging, batteries, UPS, and grid service solutions.

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